United States Department of the Interior

FISH AND WILDLIFE SERVICE
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October 23, 2013

To: Interested Parties

From: Josh Gruber, Fish Biologist, Red Bluff Fish and Wildlife Office

Subject: Biweekly report (October 8, 2013 - October 21, 2013)

Please find attached preliminary daily estimates of passage, 90% confidence intervals, and fork length ranges of juvenile salmonids sampled at Red Bluff Diversion Dam for the period October 8, 2013 through October 21, 2013. Race designation was assigned using length-at-date criteria.

Please note that passage estimates for October 1 through October 17, 2013 (federal government shutdown period) will not be generated or added to brood-year totals and confidence intervals until the November 5, 2013 biweekly report is generated. Daily passage for this un-sampled period will be interpolated using a monthly mean daily passage estimate calculated from data collected between October 18 through October 31, 2013.

This report also contains graphical displays of salmonid passage dating back to 2006 for comparison.

Please note that data contained in these reports is subject to revision as this data is preliminary and undergoing QA/QC procedures.

If you have any questions, please feel free to contact me at (530) 527-3043 ext 233.

Table 1.— Preliminary estimates of passage by brood-year (BY) and run for unmarked juvenile Chinook salmon and steelhead trout captured by rotary-screw traps at Red Bluff Diversion Dam (RK391), Sacramento River, CA, for the dates listed below. Results include estimated passage, peak river discharge volume, water temperature, turbidity, and fork length (mm) range in parentheses. A dash (-) indicates that sampling was not conducted on that date.

				Estimated passage				
Date	Discharge volume (cfs) [1]	Water temperature (°C)	Water turbidity (NTU)	BY13 Winter	BY13 Spring [2]	BY12 Fall	BY13 Late-Fall	BY13 RBT
10/8/2013	7,010	13.4	–	–	–	–	–	–
10/9/2013	7,030	13.2	–	–	–	–	–	–
10/10/2013	7,050	13.6	–	–	–	–	–	–
10/11/2013	7,110	13.8	–	–	–	–	–	–
10/12/2013	7,070	13.5	–	–	–	–	–	–
10/13/2013	7,220	13.4	–	–	–	–	–	–
10/14/2013	7,370	13.4	–	–	–	–	–	–
10/15/2013	7,390	13.4	–	–	–	–	–	–
10/16/2013	7,260	13.2	–	–	–	–	–	–
10/17/2013	7,260	13.2	–	–	–	–	–	–
10/18/2013	7,260	13.6	2.5	14,778 (35 − 67)	2,199 (31 − 34)	76 (135)	1,137 (74 − 119)	233 (39 − 70)
10/19/2013	7,260	13.8	1.8	10,561 (35 − 67)	1,908 (32 − 34)	72 (137)	523 (69 − 124)	0 (−)
10/20/2013	7,280	13.7	1.7	10,236 (35 − 69)	1,626 (31 − 34)	89 (129 − 136)	625 (70 − 122)	30 (70)
10/21/2013	7,350	13.8	1.9	12,310 (35 − 68)	1,211 (31 − 34)	30 (142)	724 (70 − 126)	60 (78 − 170)
Biweekly Total [2]				**83,799**	**10,416**	**467**	**5,266**	**565**
Biweekly Lower 90% Confidence Interval				47,675	5,644	100	2,635	-8
Biweekly Upper 90% Confidence Interval				119,923	15,188	835	7,896	1,138
Brood Year Total				**636,764**	**10,416**	**23,666,219**	**45,766**	**162,166**
Brood year Lower 90% Confidence Interval				480,644	5,644	16,502,269	20,929	91,418
Brood year Upper 90% Confidence Interval				792,883	15,188	30,830,168	70,603	232,914

[1] Peak daily discharge values do not account for diversions at RBDD and only represent peak flows registered at the Bend Bridge Gauging station (http://cdec2.water.ca.gov/cgi-progs/queryFx?bnd).

[2] Brood-year 2013 began on 10/16/13 according to length-at-date criteria (Greene 1992); brood-year 2012 total was estimated 300,752.

[3] Biweekly totals may be greater than the sum of the daily estimates presented in this table if sampling was not conducted on each day of the biweekly period. A dash (-) denotes those dates. To estimate daily passage for days that were not sampled, we impute missed sample days with the weekly mean value of days sampled within the week.

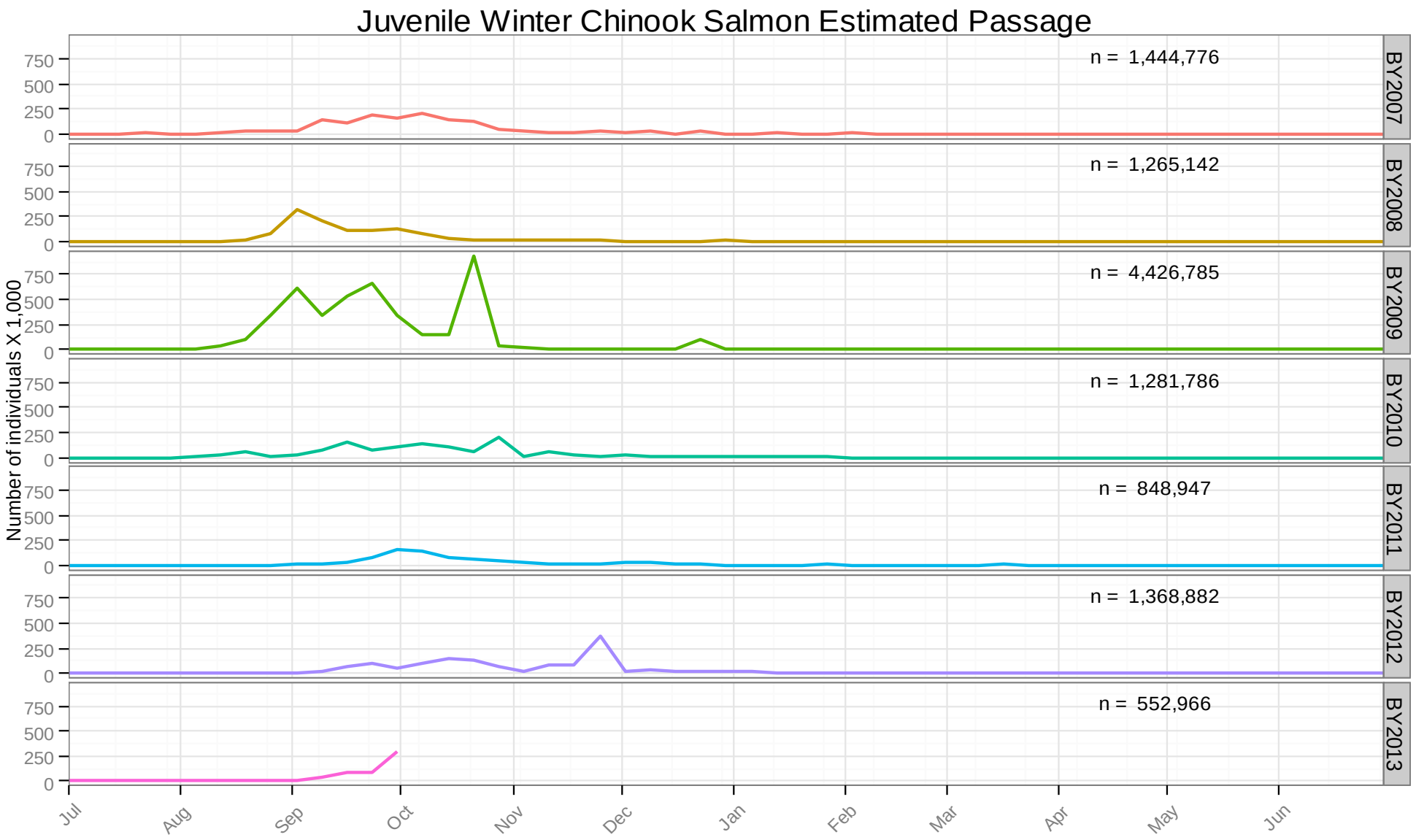

Figure 1. Weekly estimated passage of juvenile winter Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period July 1 2007 to present .

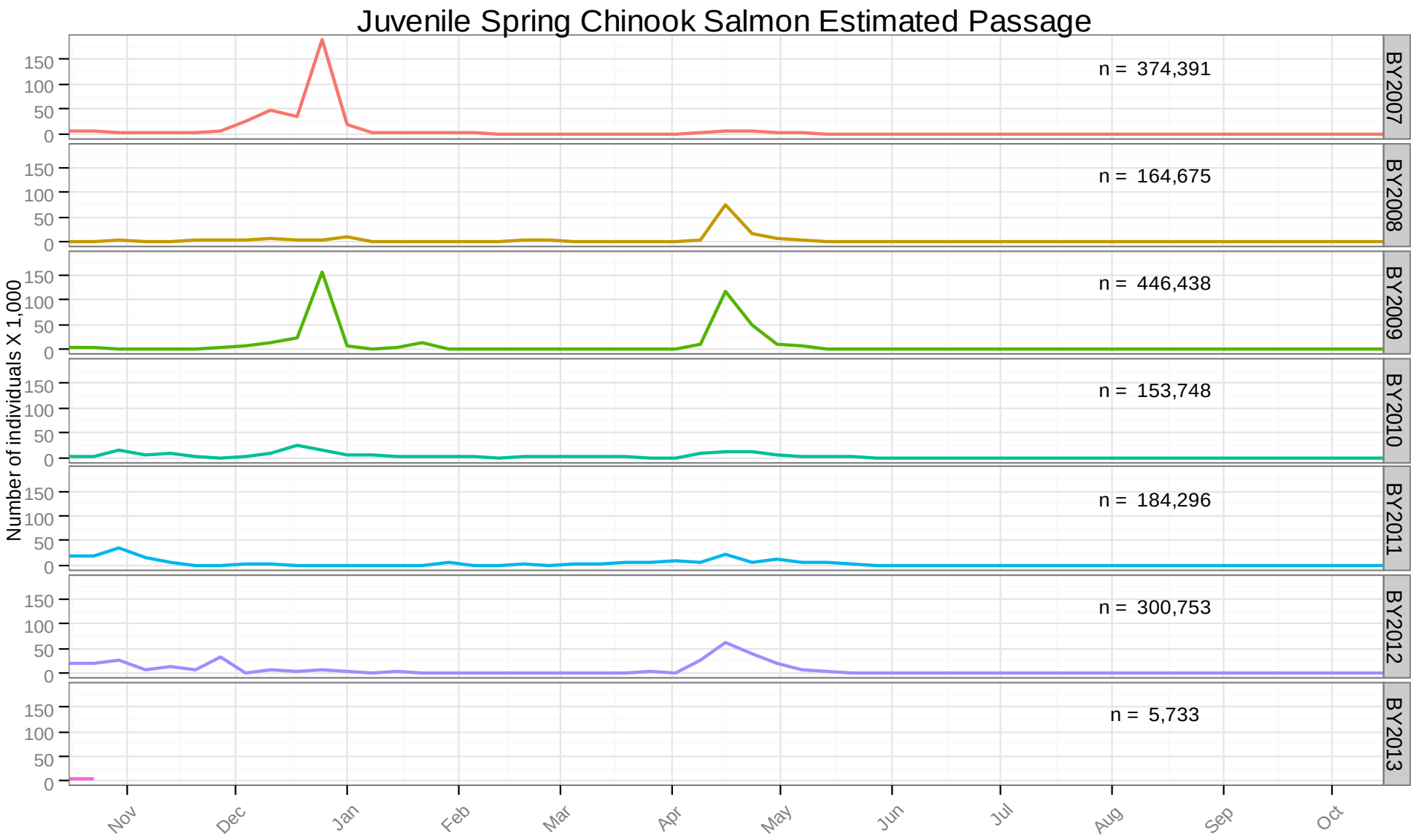

Figure 2. Weekly estimated passage of juvenile Spring Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period October 16 2007 to present .

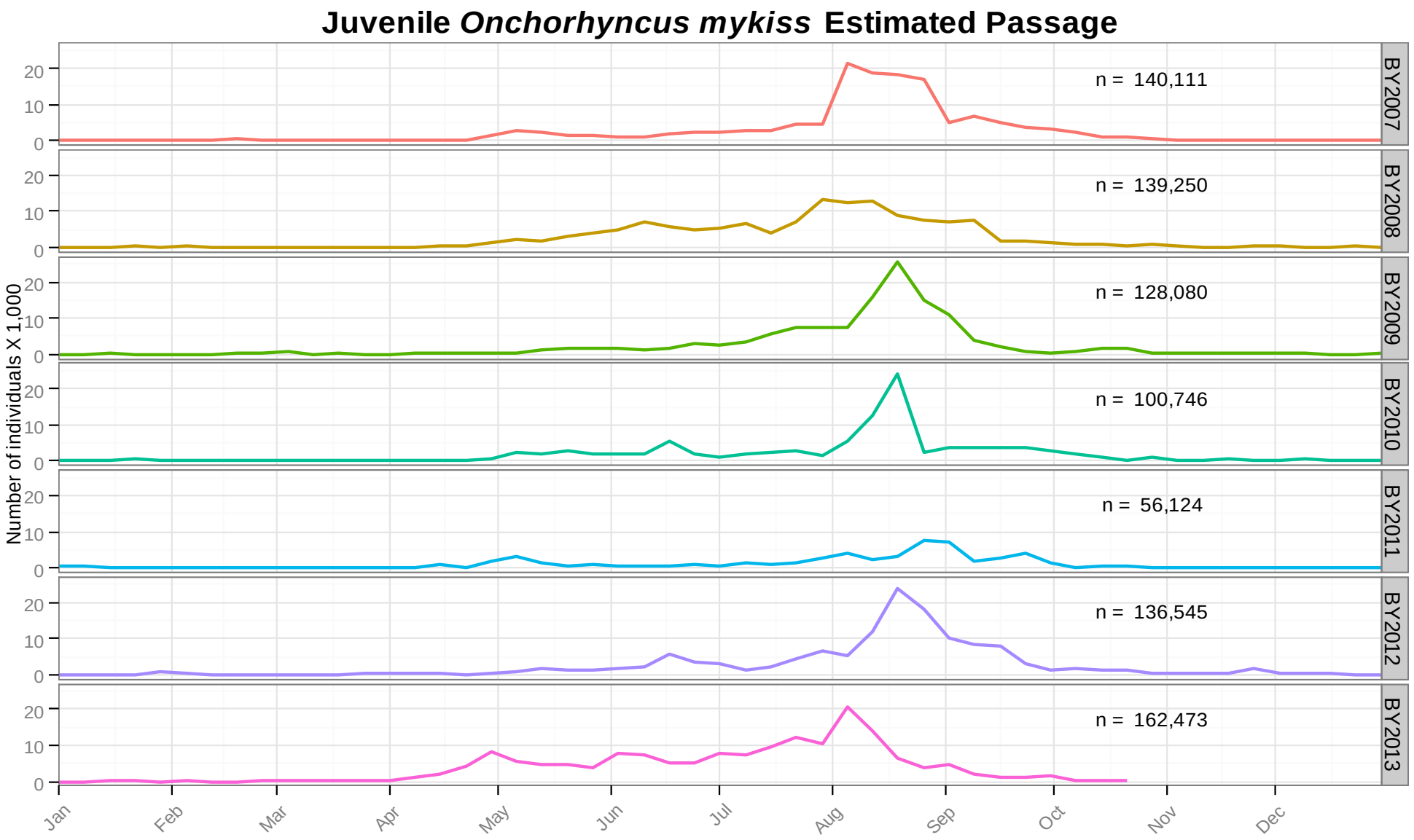

Figure 3. Weekly estimated passage of juvenile Rainbow/Steelhead trout at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period January 1 2007 to present .

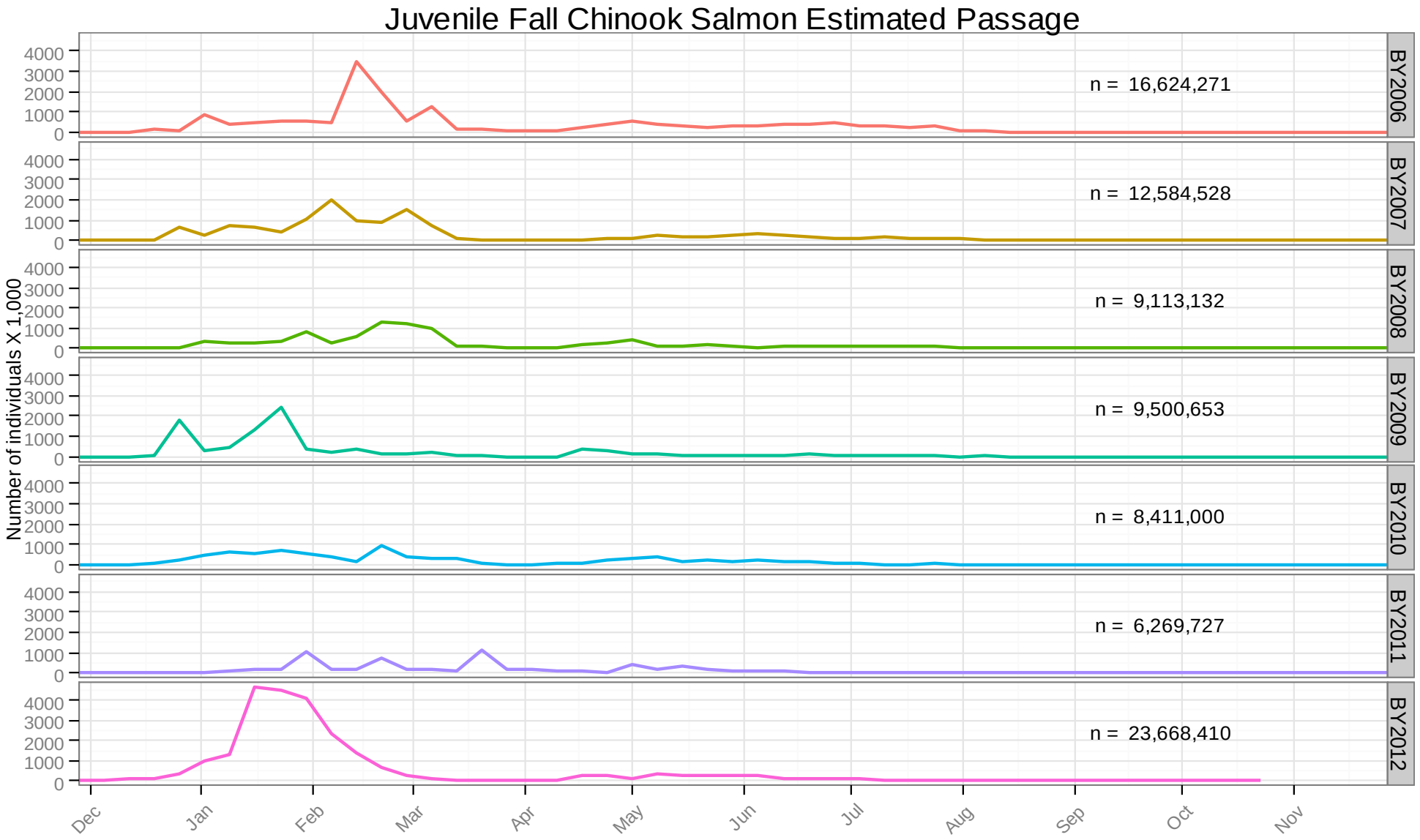

Figure 4. Weekly estimated passage of juvenile Fall Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period December 1 2006 to present .

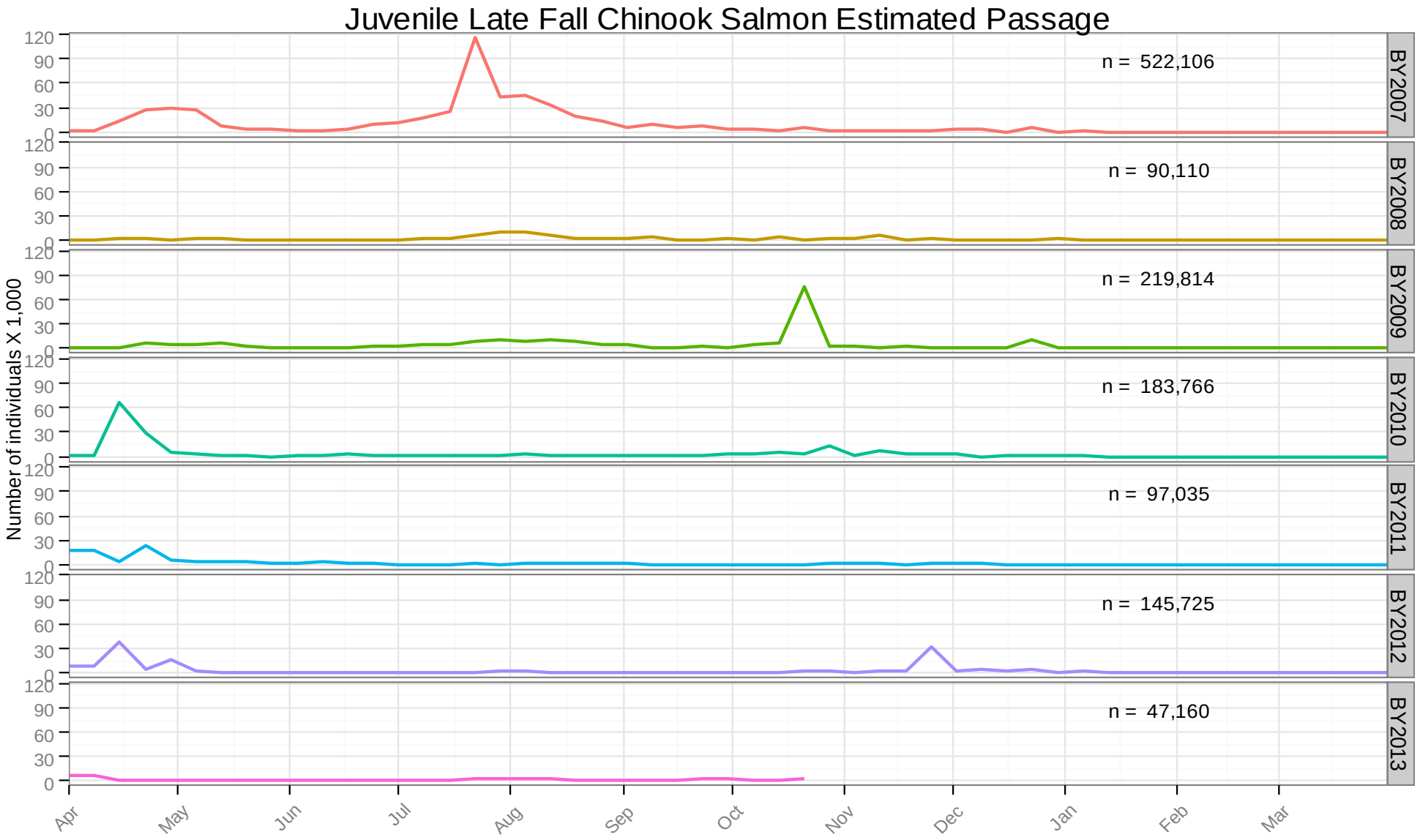

Figure 5. Weekly estimated passage of juvenile Late Fall Chinook Salmon at Red Bluff Diversion Dam (RK391), by brood-year (BY). Fish were sampled using rotary-screw traps for the period April 1 2007 to present .

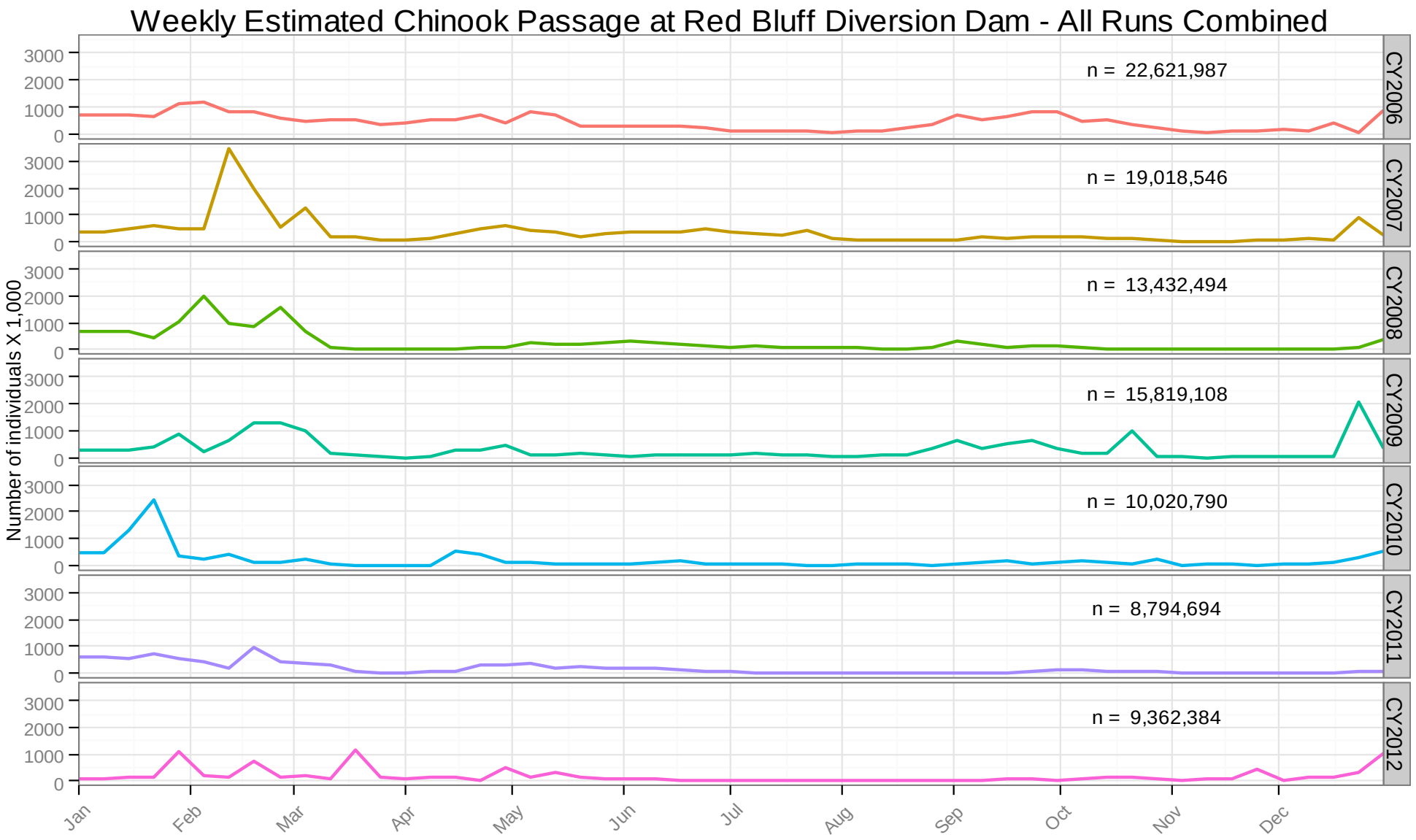

Figure 6. Weekly estimated passage of juvenile Chinook Salmon at Red Bluff Diversion Dam (RK391), by calendar year. Fish were sampled using rotary-screw traps for the period January 1 2006 to December 31 2012